

Workers' Compensation Managed Care Pilot Project

FINAL REPORT TO THE LEGISLATURE

Executive Summary



April 1997

***Washington
Department of Labor
and Industries***

***University of
Washington Department
of Health Services***

CONTENTS OF THIS REPORT

The Workers' Compensation Managed Care Pilot Project Final Report to the Legislature contains material that has been prepared by the University of Washington and by the Department of Labor and Industries (L&I). L&I's intent in partnering with the University of Washington's Department of Health Services (UW) was to enlist the expertise and objectivity of its research staff to conduct an independent, scientific evaluation of the Managed Care Pilot. The research and analysis conducted by the UW research team have been structured into policy chapters that comprise the majority of this report.

Descriptive information on the creation, implementation, and operation of the Managed Care Pilot is also included in this report. Department of Labor and Industries staff prepared the chapter on pilot design and implementation. Finally, in an effort to bring the two elements of the report together in an abbreviated form, the UW research team jointly prepared an Executive Summary of the pilot and its findings with the assistance of the department.

Survey instruments and questionnaires developed and used by the UW research team for this evaluation are separate from this report and can be obtained by sending a request to the following address:

Department of Labor and Industries
Health Services Analysis
Managed Care Pilot Project
PO Box 44322
Olympia WA 98504-4322

The following is a list of authors responsible for each chapter of the *Final Report to the Legislature*:

Executive Summary	Thomas Wickizer, PhD, Principal Investigator, UW Dept. of Health Services Gary Franklin, MD MPH, L&I, Medical Director
Chapter 1: <i>Pilot Design and Implementation</i>	Roy Plaeger-Brockway, MPA, L&I, Health Services Analysis Bill Stoner, MPA, L&I, Health Services Analysis Blake Maresh, MPA, L&I, Health Services Analysis
Chapter 2: <i>Research Design</i>	Thomas Wickizer, PhD, Principal Investigator, UW Dept. of Health Services
Chapter 3: <i>Cost Analysis</i>	Allen Cheadle, PhD, UW Dept. of Health Services With assistance from Jutta Joesch, PhD In consultation with Kevin Cain, PhD, UW Dept. of Biostatistics
Chapter 4: <i>Medical Outcomes and Patient Satisfaction</i>	Kelly Kyes, PhD, UW Dept. of Health Services In consultation with Kevin Cain, PhD, UW Dept. of Biostatistics
Chapter 5: <i>Employer Satisfaction</i>	Kelly Kyes, PhD, UW Dept. of Health Services In consultation with Kevin Cain, PhD, UW Dept. Biostatistics
Chapter 6: <i>Qualitative Analysis</i>	Sheryl Schwartz, MPA, UW Dept. of Health Services Beryl Schulman, PhD, UW Dept. of Health Services Frances Marshall, MHA, Harborview Medical Center In consultation with Allen Cheadle, PhD, UW Department of Health Services In consultation with Carolyn Madden, PhD, UW Department of Health Services

WORKERS' COMPENSATION ADVISORY COMMITTEE

The authors want to acknowledge the Workers' Compensation Advisory Committee, as represented by its Health Care Reform Subcommittee. The WCAC Subcommittee played an important role in the Managed Care Pilot by providing the input from the business and labor communities of Washington State. As specified in the enabling legislation for the Managed Care Pilot, the Health Care Reform Subcommittee of the WCAC was intended to ensure the pilot addressed issues of importance to business, labor and self-insured employers.

Clif Finch
Association of Washington Business

Robby Stern
Washington AFL-CIO

Janice Gee
Washington Retail Association

Robert Dilger
Washington State Construction
Trades Council

Beverly Simmons
Washington Hospital Services

Dave Lovell
Teamsters Union

Deena Pease and Paula Stewart
Weyerhaeuser Company

Greg Devereux
Washington Federation of
State Employees

Tom Egan
Board of Industrial Insurance Appeals

Doug Connell
Theresa Whitmarsh
Chairs, L&I Assistant Director for Industrial Insurance

EXECUTIVE SUMMARY

I. Development and Implementation of the Managed Care Pilot

Background and Introduction

The Washington State Department of Labor and Industries (L&I) sponsored a major initiative to assess the effects of providing medical treatment for injured and ill workers through managed care arrangements. Initially authorized by the 1993 Health Services Act, and extended by the 1995 Legislature, this initiative, known as the Managed Care Pilot (MCP), represents one of the first efforts in the country to assess comprehensively the effectiveness of managed care within a workers' compensation system. The intent of the authorizing legislation was to develop and implement a pilot project that would evaluate the impact of managed care on: medical and disability costs, quality of care, worker satisfaction with medical care, and employer satisfaction.

The MCP intervention began in April 1995 and concluded December 1996. To learn as much as possible from the pilot, L&I contracted with the University of Washington to conduct an independent scientific evaluation.

This report to the legislature describes the MCP and presents the final results of the University of Washington's evaluation.

Design of the Pilot

The MCP was designed to evaluate the experience of workers receiving care for occupational injuries and illnesses through managed care arrangements compared to traditional fee-for-service arrangements. The MCP involved two important changes to the traditional fee-for-service system:

- The *method of payment* at the plan level was changed from fee-for-service, based on the L&I fee schedule, to experience-rated capitation, whereby the participating plans assumed financial risk for the services provided by agreeing to accept a pre-paid amount for covered workers.
- The *delivery of care* at the clinic level was changed from the traditional office-based fee-for-service model to an occupational medicine (occ-med) model, with clinical oversight and care provided by physicians with specialized training in occupational medicine. The occ-med model emphasized the use of occ-med protocols, care coordination and ongoing follow-up aimed at getting the injured worker back to work in a timely manner.

L&I conducted a formal bidding process to select health plans for the MCP. Two health plans were selected as a result of this process: Providence Health Plan, based in Seattle, and Kaiser Foundation Health Plan of the Northwest in Portland, which serves the population of southwest Washington. The plans' service areas, seven counties that included parts of both eastern and western Washington, defined the geographic areas where the pilot was implemented.

In early January 1995, L&I commenced a formal marketing campaign to enroll employers in the pilot within this seven-county pilot area. This marketing effort included a mass mailing to 10,000 firms and other related marketing activities carried out with Providence and Kaiser.

The authorizing legislation stipulated that firms' enrollment in the pilot was to be completely voluntary. The authorizing legislation required that one of two conditions be met: an affirmative formal vote by a majority of workers at the work site favoring participation, or the exclusive bargaining representative for the workers voluntarily agreeing to the terms of the pilot. If the majority of workers voted to participate, all workers had to abide by the vote, including those that voted against participation. Approximately a third of the workers in firms that eventually enrolled in the pilot voted against participation.

Two hundred forty-eight firms expressed serious interest in the pilot. Of these, 93% took a formal vote, and 120 firms, representing 177 worksites, eventually joined the pilot. The 120 firms had a combined (estimated) work force of 7,041 workers, including 3 self-insured firms with 1,516 workers.

All firms were to be enrolled in the pilot by April 1, 1995. However, the voting and enrollment processes took longer than anticipated, and this target date was extended to October 1, 1995 to allow as many firms as possible to enroll. After a firm enrolled in the pilot, workers who were injured on or before March 31, 1996 were required to seek treatment for their injury through one of the participating managed care plans. This requirement was in force for nine months after the injury event. After that date, workers could seek treatment from any provider. The delivery of care provided through the MCP ended on December 31, 1996.

II. Managed Care Pilot Evaluation

Evaluation Goals and Research Design

The aim of the evaluation was to determine the impact of managed care on:

- medical costs and disability payments
- quality of care, as measured by functional outcomes
- patient satisfaction
- employer satisfaction

To accomplish this aim, the evaluation compared the experience of intervention firms enrolled in the pilot with that of control firms, whose workers received traditional fee-for-service care. In addition, the evaluation documented important aspects of the pilot's design and implementation through a qualitative analysis.

The evaluation was organized around four components, each having its own methods, measures and data sources. These four components were:

- cost analysis
- patient outcome and satisfaction survey
- employer satisfaction survey
- qualitative analysis

The evaluation's initial design called for the development of a randomized trial, with pilot firms assigned at random to intervention or control status. Marketing the pilot, conducting the necessary voting, and enrolling firms required more time than anticipated and, in the face of unavoidable delays, the plan for a randomized trial had to be abandoned. Instead, the evaluation developed a matched control-group design, whereby control firms were selected to be as comparable as possible to intervention firms.

The University of Washington evaluation team, in close consultation with L&I, developed a procedure for selecting control firms based upon a hierarchical set of explicit matching criteria that included:

- county
- risk class
- retrospective rating status
- firm size or total premium
- premium per hour

The goal of this selection procedure was to identify control firms that would be similar in important respects to the intervention firms. For example, using county as the initial matching variable allowed the intervention and control firms to have their claims adjudicated by the *same* L&I claims manager and have workers face the *same* general environmental circumstances in seeking care. To improve the power of statistical tests, the evaluation attempted to select control firms so that approximately two control group workers would be included for every intervention group worker.

Using this matching procedure, the evaluation selected 392 control firms, with a total estimated employee population of 12,296. Injury tracking in the control firms started July 1, 1995 and continued for 12 months through June 30, 1996.

Information on the population size and number of incident injuries occurring during the MCP is summarized in Table 1 (next page). As shown, there were 1,354 injuries among the 7,041 workers enrolled in the MCP intervention group and 1,708 injuries among workers in the control group. Of the 3,062 total injuries and illnesses, 609 resulted in the worker receiving compensation for losing at least four days of work time (referred to as compensable or time loss claims).

Table 1: Population Size and Number of Injuries In Intervention and Control Firms

	Intervention Group	Control Group	Total
Firms	120	392	512
Enrollees	7,041	12,296	19,337
Incident injuries	1,354	1,708	3,062
Compensable claims	274	335	609

The goal of selecting comparable intervention and control groups appeared to be achieved, as indicated by data gathered through the six-week patient survey (Table 2). The two groups were very similar on virtually all of the measures, including self-reported injury severity.

Table 2: Selected Characteristics of Injured Workers In Intervention and Control Groups

Variable	Intervention Group (n = 579)	Control Group (n = 723)
Age	Mean = 35.3	Mean = 35.4
Sex	Males = 75%	Males = 78%
Race/ethnic group	White = 83% Black = 4% Other = 7%	White = 81% Black = 5% Other = 8%
Self-report severity of injury	Not severe = 22% Average = 27% Severe = 51%	Not severe = 26% Average = 24% Severe = 50%
Household income	<10,000 = 13% 10-20,000 = 24% 21-30,000 = 21% 31-40,000 = 19% >40,000 = 22%	<10,000 = 11% 10-20,000 = 26% 21-30,000 = 27% 31-40,000 = 15% >40,000 = 23%
Self-assessment of general health, range = 0-100	Mean = 55.4	Mean = 56.1
General satisfaction with health care, range = 1-5	Mean = 3.7	Mean = 3.7

Methods, Measures and Data Sources

The four components of the evaluation assessed different aspects of the pilot through individually tailored methods and measures.

1. Cost Analysis

The cost analysis used data provided directly by L&I for all state-fund firms in the control group. Since the managed care plans did not send bills to L&I in the usual manner, “shadow bills” were prepared and submitted to L&I to provide medical bill data for the managed care patients. Originally it was anticipated that the cost analysis would include the three self-insured firms enrolled in the MCP. But this became impractical because the reliability of data provided by the firms’ third-party administrators (TPAs) could not be verified within the time frame of the cost analysis. However, self-insured firms were included in the medical outcome and patient satisfaction survey and in the employer survey.

The cost analysis was complicated by the fact that the start and ending dates for injury tracking differed for the intervention and control groups. To ensure valid comparisons, it was important that the two groups have the same time window for injury tracking. After considering several options, we defined the time window for the cost analysis as the period between August 14, 1995 and March 31, 1996. This approach maximized the number of claims available for analysis and ensured that each claim would have a full nine-month follow-up period after the injury event.

A further complication arose because not all control claims were administered by pilot claims managers. Comparing control and intervention claims administered by specially-designated pilot claims managers and regular claims managers could introduce possible confounding into the analysis. While the results did not change substantially even when control claims administered by non-designated claims managers were included in the analysis, we chose the conservative option of restricting the analysis to claims administered by designated pilot claims managers in order to avoid possible bias arising from differences in the quality of claims administration procedures.

The impact of the pilot in the cost area was assessed by comparing the intervention and control groups on a set of cost/utilization measures, including the following:

- total medical cost per claim
- outpatient visit cost per claim
- percent workers hospitalized
- inpatient days per 1,000 claims
- surgical procedures per 1,000 claims
- number of outpatient visits per claim by provider type
- duration of time loss and time loss payments

2. Medical Outcome and Patient Satisfaction Survey

Information regarding medical outcomes and patient satisfaction was gathered through specially designed surveys administered to workers six weeks post injury and again at six months for those workers with a compensable injury or illness (claims with four or more days of lost work time, resulting in the worker going on “time loss”). This information was collected through telephone interviews conducted by University of Washington staff. The surveys included a broad range of measures pertaining to:

- physical functioning
- ability to perform social functions and roles
- pain
- general health and mental health
- role limitations
- upper-body mobility
- satisfaction with treatment overall and access to care
- satisfaction with attending physician and specialist referrals
- work modification
- return to work

We attempted to contact and interview all intervention and control workers who received medical care and filed a claim during the pilot, including injured workers in the three self-insured firms. A total of 1,302 workers participated in the six-week interviews, 579 in the intervention group and 723 in the control group. These completed interviews represented response rates of 50% and 45%, respectively. Follow-up six-month interviews with workers on time loss were completed on 151 intervention group workers (60% response rate) and 226 controls (60% response rate).

3. Employer Survey

The effects of the pilot on employer satisfaction were assessed through a specially designed survey administered once to intervention and control firms, three to four months after the filing of a claim by an employee. The person in each firm identified as most knowledgeable about the workers' compensation system and its operations was selected for interviewing. The survey covered several areas, including:

- treatment and provision of treatment information
- time loss cases
- work modifications
- claims processing
- overall satisfaction with the system
- provision of information regarding access to care and workplace safety

Survey data were collected from 97 intervention and 146 control firms. The respective response rates were 90% and 48%. Control firms had little motivation to participate in the survey. The low response reflects the problems encountered in gaining cooperation and justifying the survey to control firms.

4. Qualitative Analysis

The fourth component of the evaluation, the qualitative analysis, was designed to assess those aspects of the pilot that could not be analyzed using quantitative techniques alone. The methodology for this component consisted of interviews, both in-person and by telephone, with key informants and systematic review of relevant documents within selected broad areas of investigation, including:

- legislative process and political context
- processes involving the Workers' Compensation Advisory Committee's Subcommittee on Health Care Reform (WCAC subcommittee)
- managed care organizations' decision making process
- employer and employee recruitment processes
- medical management
- claims management
- dispute resolution process
- workplace safety
- L&I implementation processes

The number of key informants interviewed within each of these areas ranged from 11 to 74. Cooperation among key informants was very good. Most of the individuals contacted agreed to participate in the interviews, some of which lasted over an hour.

Major Findings

The major findings of the evaluation are summarized below, beginning with the results of the cost analysis.

Analysis of Medical and Disability Costs

The most important differences were found in medical costs. Differences in disability costs and time loss duration favored the intervention group, but most of these differences were not statistically significant. Medical care utilization exhibited few differences that were large enough to achieve statistical significance.

Controlling out-of-network utilization by managed care patients proved to be more difficult than anticipated. Approximately 36% (439) of managed care patients had one or more out-of-network visits. Of these patients, 37% (161) had an initial visit in-network and then went out-of-network for some or all of their subsequent care. Sixty-three percent (278) had an initial visit out-of-network. Of these patients, 41% (115) had no subsequent care, and 12% (32) obtained all of

their care in-network. The remaining 47% (131) of patients who had an initial out-of-network visit and who needed subsequent care obtained all (86) or some (45) of that care out-of-network.

It is unclear why managed care patients chose to go out-of-network. This could have indicated unwillingness to abide by the restrictions imposed by the pilot, dissatisfaction with care received previously from the plans, or some other reason. Since it was unclear how much of the out-of-network care would have been provided by the plans or what motivated patients to seek out-of-network care in the first place, we present the results of the medical cost analysis with the out-of-network care costs both included and excluded. Including out-of-network bills increased medical costs for the intervention group by approximately 8% (from \$514 to \$553) but this did not alter the fundamental findings.

A. Effects on Medical Care Utilization. There was no well-defined pattern of differences in utilization between the intervention and control groups. Inpatient hospital utilization in the intervention group was higher (26.9 versus 10.2 inpatient days per 1,000 claims) but the difference was not statistically significant. Outpatient utilization, measured as the number of visits per person, was lower (3.1 versus 3.9 visits per claim, $p = .05^a$). The outpatient surgical rate in the two groups was similar.

B. Effects on Medical Costs. Table 3 on the following page presents summary results for the medical cost analysis. Total medical costs were 27% lower, on average, for the intervention group (\$552 versus \$759, $p = .02$) and were 32% lower when out-of-network claims were excluded ($p < .01$). The difference in total costs primarily reflected differences in outpatient surgical costs and in the other outpatient costs, such as pharmacy and physical therapy. Large, and statistically significant ($p < .01$), differences were also observed in miscellaneous costs.

^a Differences are considered “statistically significant” if the p-value is equal to or less than .05.

Table 3: Analysis of Medical Costs

<i>Includes Out-of-Network Care Provided</i>				
Variable	Statistical Significance*	Intervention Group (n = 670) (\$)	Control Group (n = 786) (\$)	Percent Difference (%)
Total medical cost per claim	.02 ($<.01$)**	552.70 (513.59)**	759.47	27.2 (32.4)**
<i>Inpatient</i>				
Total cost per claim	.88 (.71)	39.70 (26.54)	35.26	-12.6 (24.7)
<i>Outpatient</i>				
Total visit cost per claim	.34 (.07)	135.11 (124.37)	147.02	8.1 (15.4)
Outpatient surgery cost per claim	.27 (.23)	92.63 (88.81)	129.05	28.2 (31.2)
<i>Other Costs</i>				
Pharmacy	$<.01$ ($<.01$)	11.80 (11.49)	20.40	42.1 (43.7)
Laboratory	.05 (.05)	2.23 (2.23)	1.04	-115.4 (-115.4)
X-ray	.12 (.06)	45.07 (42.20)	58.98	23.6 (28.5)
Physical therapy	.15 (.14)	58.23 (57.85)	85.76	32.1% (32.6)
Other miscellaneous services	$<.01$ ($<.01$)	167.93 (160.12)	281.97	40.4 (43.2)

* Differences are considered "statistically significant" if the p-value is equal to or less than .05 (e.g., $p = .05$). All statistical tests were two-tailed.

** Shown in parentheses are medical costs, and the associated percent differences and statistical significance levels, for the intervention group when out-of-network care is **excluded**. For example, excluding out-of-network care reduces total cost per claim from \$552.70 to \$513.59, which increase the magnitude of the percent difference in costs (from 27.2% to 32.4%) and decreases the p-value (statistical significance) from .02 to $<.01$.

C. Effects on Disability Measures. Key findings regarding disability costs are shown in Table 4. A higher percentage of the control group was put on time loss (18.8% versus 15.1%) but this difference achieved only borderline significance ($p = .06$). The control group also had higher average time loss payments (\$489 versus \$308) and longer duration on time loss (10.8 versus 8.4 days), but these differences were not statistically significant.

Table 4: Time Loss Duration and Disability Cost

Variable	Statistical Significance*	Intervention Group (n = 670)	Control Group (n = 786)
Percent on time loss	.06	15.1%	18.8%
Time loss costs (mean)	.08	\$307.57	\$489.38
Time loss days (mean)	.29	8.4	10.8

* Differences are considered "statistically significant" if the p-value is equal to or less than .05 (e.g., $p = .05$). All statistical tests were two-tailed.

Analysis of Medical Outcomes and Patient Satisfaction

A. Functional and Medical Outcomes. The analysis showed some differences favoring the control group in perceived outcomes, but, there were no important differences in functional outcomes (Tables 5 and 6). Twice as many workers in the intervention group thought recovery was going poorly (12% versus 6%) and a greater proportion (25% versus 20%) assessed their overall outcome of treatment as poor. But on more objective measures of function shown in Table 5, there were no meaningful differences in the two groups. Workers in both groups followed up at six months (Table 6) tended to be less positive about their treatment. There were no statistically significant differences at six months in pain, mental health status, or physical functioning. The intervention group, however, did have lower role functioning scores (47.6 versus 58.7, $p = .02$). [Role function is a self-reported measure of how well an individual is able to carry out activities related to personal and social roles.]

Table 5: Medical Outcomes Measures for Six-Weeks Interviews

Subscale	Statistical Significance*	Intervention Group (n = 579)	Control Group (n = 723)
How well is recovery going?	p = .002	poorly = 12% so-so = 19% very well = 69%	poorly = 6% so-so = 22% very well = 72%
What is your overall assessment of the outcome of your treatment?	p = .01	poor = 25% good = 26% excellent = 50%	poor = 20% good = 22% excellent = 58%
		Mean (S.D.)⁺	Mean (S.D.)
Pain ⁺⁺	p = .90	45.9 (12.9)	46.1 (13.3)
Role functioning ⁺⁺	p = .16	56.2 (42.9)	59.6 (43.5)
Physical functioning ⁺⁺	p = .14	80.4 (25.5)	82.5 (24.7)
Mental health ⁺⁺	p = .78	68.9 (23.7)	68.6 (23.9)

* Differences are considered "statistically significant" if the p-value is equal to or less than .05 (e.g., p = .05).
All statistical tests were two-tailed.
+ Standard deviation in parenthesis.
++ Measure based on scale, where 0 = poor and 100 = excellent.

Table 6: Medical Outcomes Measures for Six-Months Interviews

Subscale	Statistical Significance*	Intervention Group (n = 151)	Control Group (n = 226)
How well is recovery going?	p = .08	poorly = 15% so-so = 35% very well = 51%	poorly = 10% so-so = 27% very well = 64%
What is your overall assessment of the outcome of your treatment?	p = .08	poor = 33% good = 25% excellent = 43%	poor = 24% good = 22% excellent = 54%
		Mean (S.D.)⁺	Mean (S.D.)
Pain ⁺⁺	p = .65	46.7 (14.1)	46.0 (13.0)
Role functioning ⁺⁺	p = .02	47.6 (44.3)	58.7 (44.5)
Physical functioning ⁺⁺	p = .12	67.9 (31.2)	72.3 (29.8)
Mental health ⁺⁺	p = .41	61.9 (24.3)	64.2 (24.1)

* Differences are considered "statistically significant" if the p-value is equal to or less than .05 (e.g., p = .05).
All statistical tests were two-tailed.
+ Standard deviation in parenthesis.
++ Measure based on scale where 0 = poor and 100 = excellent.

B. Satisfaction with treatment. Unlike medical and functional outcomes, which exhibited few meaningful differences, satisfaction measures exhibited a consistent pattern of differences favoring the controls. Table 7 presents results for selected satisfaction measures at six weeks and six months indicating generally lower levels of satisfaction among the intervention group. Although there was little change between six weeks and six months in magnitude of differences, in the latter period only one of the measures was statistically significant because there were fewer cases and hence less statistical power to detect differences.

Table 7: Satisfaction with Care and Physician Access

Six-Week Survey			
Variable	Statistical Significance*	Intervention Group (n=579)	Control Group (n=723)
Overall satisfaction with treatment	p < .001	Dissatisfied = 27% Uncertain = 26% Satisfied = 47%	Dissatisfied = 17% Uncertain = 32% Satisfied = 51%
Satisfaction with attending physician	p < .001	Dissatisfied = 21% Uncertain = 22% Satisfied = 57%	Dissatisfied = 13% Uncertain = 18% Satisfied = 69%
Satisfaction with overall access to care	p < .001	Dissatisfied = 38% Uncertain = 31% Satisfied = 31%	Dissatisfied = 21% Uncertain = 36% Satisfied = 43%
Six-Month Survey			
Variable	Statistical Significance*	Intervention Group (n=151)	Control Group (n = 226)
Overall satisfaction with treatment	p = .25	Dissatisfied = 36% Uncertain = 25% Satisfied = 40%	Dissatisfied = 28% Uncertain = 32% Satisfied = 41%
Satisfaction with attending physician	p = .29	Dissatisfied = 21% Uncertain = 20% Satisfied = 60%	Dissatisfied = 16% Uncertain = 17% Satisfied = 67%
Satisfaction with overall access to care	p = .04	Dissatisfied = 37% Uncertain = 33% Satisfied = 30%	Dissatisfied = 28% Uncertain = 28% Satisfied = 44%
* Differences are considered "statistically significant" if the p-value is equal to or less than .05 (e.g., p = .05). All statistical tests were two-tailed.			

C. Return to work and job modifications. The medical outcome and patient satisfaction surveys gathered information regarding return to work and job modifications. At six weeks, 52% of the intervention group had missed some work because of an injury or illness as compared to 46% of the controls (p = .07). Seventeen percent of the controls had not returned to work by six weeks as compared to only 9% of the intervention subjects (p = .01). There was no difference in the percentage of workers returning to work at six months.

Thirty-six percent of the workers in the intervention group returning to work had some job modification(s) as compared to 32% of the controls. The likelihood of a job modification involving a reassignment of duties or shortening of hours was greater for the intervention group than the controls (64% versus 52% and 20% versus 11%, respectively, $p = .01$). Despite this, there was no significant difference in earnings.

Employer Satisfaction Survey

Table 8 below provides information on employer satisfaction for selected measures. The data reported represent satisfaction with regard to the *most recent claim filed*. Intervention employers were more satisfied with the treatment information they received, and more satisfied with the quality and frequency of this information. Although not shown in the table, intervention employers were also more likely to indicate their experience with the workers' compensation system had changed for the better (43% versus 11%, $p < .001$).

Table 8: Employer Satisfaction with Medical Treatment and Information Provided

Subscale	Statistical Significance*	Intervention Group (n=97)	Control Group (n=146)
Rating of time to treat most recent claim	$p = .06$	inappropriate = 6% uncertain = 27% appropriate = 67%	inappropriate = 16% uncertain = 33% appropriate = 51%
Satisfaction with treatment information from provider about last claim	$p < .001$	dissatisfied = 27% uncertain = 10% satisfied = 64%	dissatisfied = 51% uncertain = 20% satisfied = 29%
Rating of the length of elapsed time before worker on time loss was released to return to work	$p = .04$	poor = 16% good = 22% excellent = 63%	poor = 32% good = 32% excellent = 35%
Frequency of updates on last injured worker's time loss status	$p = .01$	never = 14% as requested = 31% less than monthly = 0% monthly = 9% weekly = 29% daily = 17%	never = 29% as requested = 12% less than monthly = 9% monthly = 21% weekly = 21% daily = 9%
Quality of information from providers on most recent time loss	$p < .001$	poor = 24% good = 8% excellent = 68%	poor = 63% good = 16% excellent = 21%
Quality of information from provider regarding work modifications	$p = .05$	poor = 43% good = 0% excellent = 57%	poor = 25% good = 38% excellent = 38%

* Differences are considered "statistically significant" if the p-value is equal to or less than .05 (e.g., $p = .05$). All statistical tests were two-tailed.

Qualitative Analysis

The qualitative analysis generated a number of valuable insights regarding the design and implementation of the managed care pilot, which provides a useful context for interpreting the evaluation's quantitative results. Selected findings from the qualitative analysis are highlighted below.

- The pilot legislation was unclear in its definition of “equivalency of benefits,” which led to confusion over the extent to which workers participating in the Managed Care Pilot could directly access providers of their choice. This lack of clarity impeded the development and implementation of the pilot and led to confusion among stakeholder groups.
- The implementation timeframe was too tight to allow adequate marketing of and education about the pilot. This may have resulted in lower enrollment and higher out-of-network care than anticipated.
- The availability and accessibility of providers was a critical factor in the decision of employers and employees to participate in the Managed Care Pilot. Inconvenient clinic location and perceived inadequate choice of providers within health plans was cited as a key obstacle to employer and employee support of the managed care concept. The need for and importance of assuring adequate availability and accessibility of providers delivering care through a managed care network should be recognized.
- The restricted nature of the occ-med care network resulted in inconvenient clinic locations, which was cited as a source of dissatisfaction among managed care patients.
- Structuring the right balance of risks and rewards to attract the interest of managed care organizations in participating in the pilot was an important, but complex, challenge. A number of managed care organizations felt the capitation rate, in light of potential adverse selection problems, involved too much risk and not enough reward to warrant participation. More providers may have been willing to participate if they had been given incentives to manage disability costs in addition to medical costs.
- The cost savings associated with managed care may have resulted from the change of incentives introduced by the capitation arrangement or from changes in the organization and delivery of care through the occ-med clinics. While it is not known which of these was more important, claims managers at L&I, as well as many managed care providers, stressed the importance of the occ-med model of care delivery.

- If the two claims management tasks (adjudication and medical management) are separated, it must be acknowledged that they are interrelated activities. Removal of medical management from the workers' compensation claims manager's role can work well, provided that claims personnel are kept closely abreast of the medical management of each case in a timely manner.
- As a result of their participation in the managed care pilot, employers became more involved in their employees' workers' compensation claims and, at the same time, providers worked more closely with employers toward the goal of fostering improved return to work. An additional result of pilot participation for many employers was increased awareness of workplace safety issues.
- Out-of-network care, whether due to a lack of education or incentives, created extra work for the managed care organizations and L&I, and it strained relations between managed and non-managed care providers. In any future managed care program, the issue of preventing out-of-network care should be more rigorously addressed.

III. Summary and Conclusions

The Managed Care Pilot represents an important innovation within the context of the Washington State Workers' Compensation System that tested the combined effects of changing reimbursement and the organization of care delivery. The evaluation conducted by the University of Washington was aimed at assessing the effects of the Managed Care Pilot in several areas, and significant differences were found in costs as well as patient and employer satisfaction.

Key findings of the evaluation include the following:

- Managed care reduced total medical costs by approximately 27%, primarily by reducing expenses for outpatient surgery and other frequently-used outpatient services, such as X-ray, pharmacy, physical therapy and related ancillary services. Managed care also appeared to have favorable effects in reducing the number of workers on time loss and time loss payments.
- Managed care had no important adverse effect on quality. Injured and ill workers receiving managed care treatment exhibited similar functional outcomes as workers who received traditional fee-for-service treatment, although their perception of their overall outcome of treatment tended to be less positive.
- Workers who received treatment through managed care were less satisfied with their treatment and their access to care: 27% of managed care patients surveyed at six weeks voiced dissatisfaction with treatment, as compared to 17% of the controls.

- Changes introduced through managed care led to increased employer satisfaction with claims administration and with the quality and speed with which information on injured workers was provided.
- Providing care to injured and ill workers through an identified network of occ-med centered clinics fostered greater involvement of employers in the workers' compensation system and better collaboration between employers and providers around issues of return to work and job safety.

Our findings should be considered within the broader context of what is known about the effects of managed care. Unfortunately, within the workers' compensation area almost nothing is known about the impact of managed care. One study,¹ conducted in Florida among state workers, did show substantial medical cost savings, but methodological problems limit the value of this study. Further, this study did not examine managed care's effects on outcomes. The extent to which these results may be applicable to other states is unclear. Because of the lack of prior research, the MCP evaluation had to develop new instruments to measure satisfaction and outcomes or adapt measures that had been developed on other patient populations.

Outside workers' compensation, knowledge regarding managed care's effects is better developed. Studies conducted over the past decade show that patients enrolled in health maintenance organizations (HMOs) have lower hospital admission rates compared to fee-for-service patients.²⁻⁷ Fewer studies have documented the cost savings of HMOs. The most widely cited study is the early randomized trial from the RAND Health Insurance Experiment, which found HMO enrollees had, on average, 28% lower expenditures than fee-for-service patients.⁸ HMOs are able to reduce costs, in part, because they use fewer expensive tests, procedures or treatments, and use fewer treatments that have less costly alternatives.⁹⁻¹³

Managed care often involves a tradeoff of lower costs for lower levels of satisfaction. Studies have shown somewhat lower levels of satisfaction with treatment and access among HMO enrollees.¹⁴⁻¹⁷ But lower satisfaction, as a rule, has not been accompanied by lower quality. Studies have generally found outcomes and quality among HMO patients to be equal to that of fee-for-service patients.¹⁸⁻²² One recent study did show lower quality, but only for special subgroups of chronically ill patients--patients below the poverty level and elderly patients.²³

The findings of the Managed Care Pilot are quite consistent with conclusions from prior studies in the general health care arena. Managed care appears to offer promise for improving cost efficiency within the workers' compensation system without any important loss of quality, measured by functional outcome. Our findings also suggest advantages to delivering care through occ-med centered networks, such as increased satisfaction among employers with claims administration and communication with providers.

There is diminished satisfaction among workers with managed care arrangements. However, a sizable percentage of workers participated in the pilot because they were required to do so. It may be that the majority of dissatisfied workers was among this group. If in the future, individual workers could choose to participate, satisfaction might be higher. It remains to be determined by policymakers whether the tradeoffs implicit in the findings of this evaluation are acceptable.

The limited nature of geographic access and the relatively limited network may also have contributed to dissatisfaction among injured workers in managed care. Increasing geographic access by expanding occ-med networks and offering choice of multiple plans might yield substantial dividends in the form of increased worker satisfaction.

The findings and lessons generated by the Managed Care Pilot evaluation highlight a number of tradeoffs. Policymakers will have to decide how to balance these tradeoffs as they seek to refine and improve the current workers' compensation system to ensure that workers receive high quality, cost-effective health care services.

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